CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board
Division of Drinking Water

October 5, 2017

System No. 1410505

Ainsley Holeso
Chief of Maintenance
NPS - Death Valley National Park
P.O. Box 579
Death Valley, CA 92328
ainsley_holeso@nps.gov

Dear Mr. Holeso:

CITATION NO. 05-13-17C-021
TOTAL COLIFORM MAXIMUM CONTAMINANT LEVEL VIOLATION FOR AUGUST 2017

Enclosed is a Citation issued to the Death Valley National Park, Furnace Creek (hereinafter "Furnace Creek Water System") public water system.

The Furnace Creek Water System will be billed at the State Water Resources Control Board's (hereinafter "State Water Board") hourly rate for the time spent on issuing this Citation. California Health and Safety Code, Section 116577, provides that a public water system must reimburse the State Water Board for actual costs incurred by the State Water Board for specified enforcement actions, including but not limited to, preparing, issuing and monitoring compliance with a citation. At this time, the State Board has spent approximately 0.5 hour(s) on enforcement activities associated with this violation

The Furnace Creek Water System will receive a bill sent from the State Board in August of the next fiscal year. This bill will contain fees for any enforcement time spent on the Furnace Creek Water System for the current fiscal year.

Any person who is aggrieved by a citation issued by the San Bernardino District may file a petition with the State Water Board for reconsideration of the citation. Petitions must be received by the State Water Board within 30 calendar days of the issuance of the citation. The date of issuance is the date when the San Bernardino District mails or serves a copy of the citation, whichever occurs first. If the 30th day falls on a Saturday, Sunday, or state holiday, the petition is due the following business day. Petitions must be received by 5:00 p.m. Information regarding filing petitions may be found at:

http://www.waterboards.ca.gov/drinking_water/programs/petitions/index.shtml

NPS has completed several directives noted in the citation but is pending a certification form. If you have any questions regarding this matter, please contact Andrés Aguirre of my staff at (909) 383-4308 or me at (909) 383-4328.

Sincerely,

Eric J. Zúñiga, P.E.
District Engineer
San Bernardino District
Southern California Field Operations Branch

Enclosures

Certified Mail No. 7006 2150 0004 3940 8331

cc: Catherine Blair, NPS Death Valley via kate_blair@nps.gov
Thomas Buck, NPS Death Valley via tom_buck@nps.gov

Citation No. 05-13-17C-021

STATE OF CALIFORNIA

STATE WATER RESOURCES CONTROL BOARD

DIVISION OF DRINKING WATER

Name of Public Water System: Death Valley National Park, Furnace Creek

Water System No: 1410505

Attention: Ainsley Holeso
Chief of Maintenance
NPS - Death Valley National Park
P.O. Box 579
Death Valley, CA 92328

Issued: October 5, 2017

CITATION FOR NONCOMPLIANCE

TOTAL COLIFORM MAXIMUM CONTAMINANT LEVEL VIOLATION

CALIFORNIA CODE OF REGULATIONS, TITLE 22, SECTION 64426.1

AUGUST 2017

The California Health and Safety Code (hereinafter "CHSC"), Section 116650 authorizes the State Water Resources Control Board (hereinafter "State Board") to issue a citation to a public water system when the State Board determines that the public water system has violated or is violating the California Safe Drinking Water Act (hereinafter "California SDWA"), (CHSC,

Division 104, Part 12, Chapter 4, commencing with Section 116270), or any regulation, standard, permit, or order issued or adopted thereunder.

The State Board, acting by and through its Division of Drinking Water (hereinafter "Division") and the Deputy Director for the Division, hereby issues this citation pursuant to Section 116650 of the CHSC to the Death Valley National Park, Furnace Creek (hereinafter "Furnace Creek Water System") for violation of CHSC, Section 116555(a)(1) and California Code of Regulations (hereinafter "CCR"), Title 22, Section 64426.1.

A copy of the applicable statutes and regulations are included in Appendix 1, which is attached hereto and incorporated by reference.

STATEMENT OF FACTS

The Furnace Creek Water System is classified as a Community water system with a population of 150, serving 81 connections. The Division received laboratory results for 11 distribution bacteriological samples collected during August 2017 from the Furnace Creek Water System. All samples were analyzed for the presence of total coliform bacteria. 2 of the 11 samples analyzed were positive for total coliform bacteria. None of the total coliform positive samples showed the presence of *Escherichia coli (E. coli)* bacteria.

DETERMINATION

CCR, Title 22, Section 64426.1, Total Coliform Maximum Contaminant Level (MCL) states that a public water system is in violation of the total coliform MCL if it collects fewer than 40 bacteriological samples per month and if more than one sample collected during any month is total coliform-positive.

The Furnace Creek Water System took fewer than 40 bacteriological samples during August 2017. The results of 2 routine samples were total coliform positive. Therefore, the Division has determined that the Furnace Creek Water System violated CCR, Title 22, Section 64426.1 during August 2017.

The Federal Revised Total Coliform Rule notes in the Code of Federal Regulations (CFR), Title 40, Section 141.859(a)(1)(ii) that a Level 1 Assessment is triggered for systems taking fewer than 40 samples per month that have two or more total coliform-positive samples in the same month. This trigger applies to the Furnace Creek Water System for August 2017.

The Federal Revised Total Coliform notes in CFR, Title 40, Section 141.859(a)(2)(ii) that a Level 2 Assessment is triggered if a water system has a second Level 1 trigger within a rolling 12-month period. The Furnace Creek Water System had a Level 1 trigger in October 2016. As this is the second Level 1 in a rolling 12-month period, this requirement applies for August 2017.

DIRECTIVES

The Furnace Creek Water System is hereby directed to take the following actions:

1. Comply with CCR, Title 22, Section 64426.1, in all future monitoring periods.

2. On or before **October 10, 2017,** notify all persons served by the Furnace Creek Water System of the violation of Section 64426.1, in conformance with CCR, Title 22, Sections 64463.4(b)&(c) and 64465. Copies of Sections 64463.4 and 64465 are included in Appendix 1.

Appendix 2: Notification Template shall be used to fulfill this directive, unless otherwise approved by the Division. – **THIS DIRECTIVE WAS COMPLETED AUGUST 28, 2017. A COPY OF THE NOTICE IS INCLUDED IN APPENDIX 2.**

3. Complete Appendix 3: Compliance Certification Form. Submit it together with a copy of the public notification to the Division on or before **November 9, 2016.**

4. Submit the information required by CCR, Title 22, Section 64426(b)(2) on or before **November 9, 2019**. Appendix 4: Positive Total Coliform Investigation may be used to fulfill this directive. – **THIS DIRECTIVE WAS COMPLETED AUGUST 23, 2017 AND IS INCLUDED IN APPENDIX 4.**

5. On or before **October 10, 2017** comply with all the corrective actions identified in the Level 2 Assessment included in Appendix 5. – **THIS DIRECTIVE WAS COMPLETED SEPTEMBER 13, 2017 AND IS INCLUDED IN APPENDIX 5.**

All submittals required by this citation shall be electronically submitted to the Division at the following address. The subject line for all electronic submittals corresponding to this citation shall include the following information: Water System name and number, citation number and title of the document being submitted.

Eric J. Zúñiga, P.E.
District Engineer
San Bernardino District
dwpdist13@waterboards.ca.gov

The State Board reserves the right to make such modifications to this Citation as it may deem necessary to protect public health and safety. Such modifications may be issued as amendments to this Citation and shall be effective upon issuance.

Nothing in this Citation relieves the Furnace Creek Water System of its obligation to meet the requirements of the California SDWA (CHSC, Division 104, Part 12, Chapter 4, commencing with Section 116270), or any regulation, standard, permit or order issued or adopted thereunder.

PARTIES BOUND

This Citation shall apply to and be binding upon the Furnace Creek Water System, its owners, shareholders, officers, directors, agents, employees, contractors, successors, and assignees.

SEVERABILITY

The directives of this Citation are severable, and the Furnace Creek Water System shall comply with each and every provision thereof notwithstanding the effectiveness of any provision.

FURTHER ENFORCEMENT ACTION

The California SDWA authorizes the State Board to: issue a citation with assessment of administrative penalties to a public water system for violation

or continued violation of the requirements of the California SDWA or any regulation, permit, standard, citation, or order issued or adopted thereunder including, but not limited to, failure to correct a violation identified in a citation or compliance order. The California SDWA also authorizes the State Board to take action to suspend or revoke a permit that has been issued to a public water system if the public water system has violated applicable law or regulations or has failed to comply with an order of the State Board, and to petition the superior court to take various enforcement measures against a public water system that has failed to comply with an order of the State Board. The State Board does not waive any further enforcement action by issuance of this Citation.

Eric J. Zúñiga, P.E. — Date 10/5/17

District Engineer

San Bernardino District

Southern California Field Operations Branch

Appendices (5):

1. Applicable Statutes and Regulations
2. Notification Letter
3. Compliance Certification Form
4. Level 1 Assessment
5. Level 2 Assessment and corrective action completed

Certified Mail No. 7006 2150 0004 3940 8331

APPENDIX 1. APPLICABLE STATUTES AND REGULATIONS FOR

Violations of Total Coliform Rule

California Health and Safety Code (CHSC):

Section 116271 states in relevant part:
(a) The State Water Resources Control Board succeeds to and is vested with all of the authority, duties, powers, purposes, functions, responsibilities, and jurisdiction of the State Department of Public Health, its predecessors, and its director for purposes of all of the following:

(1) The Environmental Laboratory Accreditation Act (Article 3 (commencing with Section 100825) of Chapter 4 of Part 1 of Division 101).
(2) Article 3 (commencing with Section 106875) of Chapter 4 of Part 1.
(3) Article 1 (commencing with Section 115825) of Chapter 5 of Part 10.
(4) This chapter and the Safe Drinking Water State Revolving Fund Law of 1997 (Chapter 4.5 (commencing with Section 116760)).
(5) Article 2 (commencing with Section 116800), Article 3 (commencing with Section 116825), and Article 4 (commencing with Section 116875) of Chapter 5.
(6) Chapter 7 (commencing with Section 116975).
(7) The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Division 43 (commencing with Section 75001) of the Public Resources Code).
(8) The Water Recycling Law (Chapter 7 (commencing with Section 13500) of Division 7 of the Water Code).
(9) Chapter 7.3 (commencing with Section 13560) of Division 7 of the Water Code.
(10) The California Safe Drinking Water Bond Law of 1976 (Chapter 10.5 (commencing with Section 13850) of Division 7 of the Water Code).
(11) Wholesale Regional Water System Security and Reliability Act (Division 20.5 (commencing with Section 73500) of the Water Code).
(12) Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002 (Division 26.5 (commencing with Section 79500) of the Water Code).

(b) The State Water Resources Control Board shall maintain a drinking water program and carry out the duties, responsibilities, and functions described in this section. Statutory reference to "department," "state department," or "director" regarding a function transferred to the State Water Resources Control Board shall refer to the State Water Resources Control Board. This section does not impair the authority of a local health officer to enforce this chapter or a county's election not to enforce this chapter, as provided in Section 116500...

(k) (1) The State Water Resources Control Board shall appoint a deputy director who reports to the executive director to oversee the issuance and enforcement of public water system permits and other duties as appropriate. The deputy director shall have public health expertise.
(2) The deputy director is delegated the State Water Resources Control Board's authority to provide notice, approve notice content, approve emergency notification plans, and take other action pursuant to Article 5 (commencing with Section 116450), to issue, renew, reissue, revise, amend, or deny any public water system permits pursuant to Article 7 (commencing with Section 116525), to suspend or revoke any public water system permit pursuant to Article 8 (commencing with Section 116625), and to issue citations, assess penalties, or issue orders pursuant to Article 9 (commencing with Section 116650). Decisions and actions of the deputy director taken pursuant to Article 5 (commencing with Section 116450) or Article 7 (commencing with Section 116525) are deemed decisions and actions taken, but are not subject to reconsideration, by the State Water Resources Control Board. Decisions and actions of the deputy director taken pursuant to Article 8 (commencing with Section 116625) and Article 9 (commencing with Section 116650) are deemed decisions and actions taken by the State Water Resources Control Board, but any aggrieved person may petition the State Water Resources Control Board for reconsideration of the decision or action. This subdivision is not a limitation on the State Water Resources Control Board's authority to delegate any other powers and duties.

Section 116555 states in relevant part:
(a) Any person who owns a public water system shall ensure that the system does all of the following:

(1) Complies with primary and secondary drinking water standards.
(2) Will not be subject to backflow under normal operating conditions.
(3) Provides a reliable and adequate supply of pure, wholesome, healthful, and potable water.

Section 116650 states in relevant part:
(a) If the department determines that a public water system is in violation of this chapter or any regulation, permit, standard, citation, or order issued or adopted thereunder, the department may issue a citation to the

public water system. The citation shall be served upon the public water system personally or by certified mail. Service shall be deemed effective as of the date of personal service or the date of receipt of the certified mail. If a person to whom a citation is directed refuses to accept delivery of the certified mail, the date of service shall be deemed to be the date of mailing.
(b) Each citation shall be in writing and shall describe the nature of the violation or violations, including a reference to the statutory provision, standard, order, citation, permit, or regulation alleged to have been violated.
(c) A citation may specify a date for elimination or correction of the condition constituting the violation.
(d) A citation may include the assessment of a penalty as specified in subdivision (e).
(e) The department may assess a penalty in an amount not to exceed one thousand dollars ($1,000) per day for each day that a violation occurred, and for each day that a violation continues to occur. A separate penalty may be assessed for each violation.

California Code of Regulations, Title 22 (CCR):

Section 64421 (General Requirements) states:
(a) Each water supplier shall:
(1) Develop a routine sample siting plan as required in section 64422;
(2) Collect routine, repeat and replacement samples as required in Sections 64423, 64424, and 64425;
(3) Have all samples analyzed by laboratories approved to perform those analyses by the State Board and report results as required in section 64423.1;
(4) Notify the State Board when there is an increase in coliform bacteria in bacteriological samples as required in section 64426; and
(5) Comply with the Maximum Contaminant Level as required in section 64426.1.
(b) Water suppliers shall perform additional bacteriological monitoring as follows:
(1) After construction or repair of wells;
(2) After main installation or repair;
(3) After construction, repair, or maintenance of storage facilities; and
(4) After any system pressure loss to less than five psi. Samples collected shall represent the water quality in the affected portions of the system.

Section 64422 (Routine Sample Siting Plan) states:
(a) By September 1, 1992, each water supplier shall develop and submit to the State Board a siting plan for the routine collection of samples for total coliform analysis, subject to the following:
(1) The sample sites chosen shall be representative of water throughout the distribution system including all pressure zones, and areas supplied by each water source and distribution reservoir.
(2) The water supplier may rotate sampling among the sample sites if the total number of sites needed to comply with (a)(1) above exceeds the number of samples required according to Table 64423-A. The rotation plan shall be described in the sample siting plan.
(b) If personnel other than certified operators will be performing field tests and/or collecting samples, the sample siting plan shall include a declaration that such personnel have been trained, pursuant to §64415 (b).
(c) The supplier shall submit an updated plan to the State Board at least once every ten years and at any time the plan no longer ensures representative monitoring of the system.

Section 64423 (Routine Sampling) states:
(a) Each water supplier shall collect routine bacteriological water samples as follows:
(1) The minimum number of samples for community water systems shall be based on the known population served or the total number of service connections, whichever results in the greater number of samples, as shown in Table 64423-A. A community water system using groundwater which serves 25-1000 persons may request from the State Board a reduction in monitoring frequency. The minimum reduced frequency shall not be less than one sample per quarter.
(2) The minimum number of samples for nontransient-noncommunity water systems shall be based on the known population served as shown in Table 64423-A during those months when the system is operating. A nontransient-noncommunity water system using groundwater which serves 25-1000 persons may request from the State Board a reduction in monitoring frequency if it has not violated the requirements in this article during the past twelve months. The minimum reduced frequency shall not be less than one sample per quarter.
(3) The minimum number of samples for transient-noncommunity water systems using groundwater and serving 1000 or fewer persons a month shall be one in each calendar quarter during which the system provides water to the public.
(4) The minimum number of samples for transient-noncommunity water systems using groundwater and serving more than 1000 persons during any month shall be based on the known population served as shown

in Table 64423-A, except that the water supplier may request from the State Board a reduction in monitoring for any month the system serves 1000 persons or fewer. The minimum reduced frequency shall not be less than one sample in each calendar quarter during which the system provides water to the public.

(5) The minimum number of samples for transient-noncommunity water systems using approved surface water shall be based on the population served as shown in Table 64423-A. A system using groundwater under the direct influence of surface water shall begin monitoring at this frequency by the end of the sixth month after the State Board has designated the source to be approved surface water.

(6) A public water system shall collect samples at regular time intervals throughout the month, except that a system using groundwater which serves 4,900 persons or fewer may collect all required samples on a single day if they are taken from different sites.

(b) In addition to the minimum sampling requirements, all water suppliers using approved surface water which do not practice treatment in compliance with Sections 64650 through 64666, shall collect a minimum of one sample before or at the first service connection each day during which the turbidity level of the water delivered to the system exceeds 1 NTU. The sample shall be collected within 24 hours of the exceedance and shall be analyzed for total coliforms. If the water supplier is unable to collect and/or analyze the sample within the 24-hour time period because of extenuating circumstances beyond its control, the supplier shall notify the State Board within the 24-hour time period and may request an extension. Sample results shall be included in determining compliance with the MCL for total coliforms in Section 64426.1.

(c) If any routine, repeat, or replacement sample is total coliform-positive, then the water supplier shall collect repeat samples in accordance with Section 64424 and comply with the reporting requirements specified in Sections 64426 and 64426.1.

Table 64423-A

Minimum Number of Routine Total Coliform Samples

Monthly Population Served	Service Connections	Minimum Number of Samples
25 to 1000	15 to 400	1 per month
1,001 to 2,500	401 to 890	2 per month
2,501 to 3,300	891 to 1,180	3 per month
3,301 to 4,100	1,181 to 1,460	4 per month
4,101 to 4,900	1,461 to 1,750	5 per month
4,901 to 5,800	1,751 to 2,100	6 per month
5,801 to 6,700	2,101 to 2,400	7 per month
6,701 to 7,600	2,401 to 2,700	2 per week
7,601 to 12,900	2,701 to 4,600	3 per week
12,901 to 17,200	4,601 to 6,100	4 per week
17,201 to 21,500	6,101 to 7,700	5 per week
21,501 to 25,000	7,701 to 8,900	6 per week
25,001 to 33,000	8,901 to 11,800	8 per week
33,001 to 41,000	11,801 to 14,600	10 per week
41,001 to 50,000	14,601 to 17,900	12 per week
50,001 to 59,000	17,901 to 21,100	15 per week
59,001 to 70,000	21,101 to 25,000	18 per week
70,001 to 83,000	25,001 to 29,600	20 per week
83,001 to 96,000	29,601 to 34,300	23 per week
96,001 to 130,000	34,301 to 46,400	25 per week
130,001 to 220,000	46,401 to 78,600	30 per week
220,001 to 320,000	78,601 to 114,300	38 per week
320,001 to 450,000	114,301 to 160,700	50 per week
450,001 to 600,000	160,701 to 214,300	55 per week
600,001 to 780,000	214,301 to 278,600	60 per week
780,001 to 970,000	278,601 to 346,400	70 per week
970,001 to 1,230,000	346,401 to 439,300	75 per week
1,230,001 to 1,520,000	439,301 to 542,900	85 per week
1,520,001 to 1,850,000	542,901 to 660,700	90 per week
1,850,001 to 2,270,000	660,701 to 810,700	98 per week
2,270,001 to 3,020,000	810,701 to 1,078,600	105 per week
3,020,001 to 3,960,000	1,078,601 to 1,414,300	110 per week
3,960,001 or more	1,414,301 or more	120 per week

Section 64423.1 (Sample Analysis and Reporting of Results) states:

(a) The water supplier shall designate (label) each sample as routine, repeat, replacement, or "other" pursuant to Section 64421(b), and have each sample analyzed for total coliforms. The supplier also shall require the laboratory to analyze the same sample for fecal coliforms or Escherichia coli (E. coli) whenever the presence of total coliforms is

indicated. As a minimum, the analytical results shall be reported in terms of the presence or absence of total or fecal coliforms, or E. coli in the sample, whichever is appropriate.
(b) The water supplier shall require the laboratory to notify the supplier within 24 hours, whenever the presence of total coliforms, fecal coliforms or E. coli is demonstrated in a sample or a sample is invalidated due to interference problems, pursuant to Section 64425(b), and shall ensure that a contact person is available to receive these analytical results 24-hours a day. The water supplier shall also require the laboratory to immediately notify the State Board of any positive bacteriological results if the laboratory cannot make direct contact with the designated contact person within 24 hours.
(c) Analytical results of all required samples collected for a system in a calendar month shall be reported to the State Board not later than the tenth day of the following month, as follows:

(1) The water supplier shall submit a monthly summary of the bacteriological monitoring results to the State Board.

(2) For systems serving fewer than 10,000 service connections or 33,000 persons, the water supplier shall require the laboratory to submit copies of all required bacteriological monitoring results directly to the State Board.

(3) For systems serving more than 10,000 service connections, or 33,000 persons, the water supplier shall require the laboratory to submit copies of bacteriological monitoring results for all positive routine samples and all repeat samples directly to the State Board.

(d) Laboratory reports shall be retained by the water supplier for a period of at least five years and shall be made available to the State Board upon request.

Section 64424 (Repeat Sampling) states in relevant part:
(a) If a routine sample is total coliform-positive, the water supplier shall collect a repeat sample set as described in paragraph (1) within 24 hours of being notified of the positive result. The repeat samples shall all be collected within the same 24 hour time period. A single service connection system may request that the State Board allow the collection of the repeat sample set over a four-day period.

(1) For a water supplier that normally collects more than one routine sample a month, a repeat sample set shall be at least three samples for each total coliform-positive sample. For a water supplier that normally collects one or fewer samples per month, a repeat sample set shall be at least four samples for each total coliform-positive sample.

(2) If the water supplier is unable to collect the samples within the 24-hour time period specified in subsection (a) or deliver the samples to the laboratory within 24 hours after collection because of circumstances beyond its control, the water supplier shall notify the State Board within 24 hours. The State Board will then determine how much time the supplier will have to collect the repeat samples.

(b) When collecting the repeat sample set, the water supplier shall collect at least one repeat sample from the sampling tap where the original total coliform-positive sample was taken. Other repeat samples shall be collected within five service connections upstream or downstream of the original site. At least one sample shall be from upstream and one from downstream unless there is no upstream and/or downstream service connection.
(c) If one or more samples in the repeat sample set is total coliform-positive, the water supplier shall collect and have analyzed an additional set of repeat samples as specified in subsections (a) and (b). The supplier shall repeat this process until either no coliforms are detected in one complete repeat sample set or the supplier determines that the MCL for total coliforms specified in Section 64426.1 has been exceeded and notifies the State Board.
(d) If a public water system for which fewer than five routine samples/month are collected has one or more total coliform-positive samples, the water supplier shall collect at least five routine samples the following month. If the supplier stops supplying water during the month after the total coliform-positive(s), at least five samples shall be collected during the first month the system resumes operation. A water supplier may request the State Board waive the requirement to collect at least five routine samples the following month, but a waiver will not be granted solely on the basis that all repeat samples are total coliform-negative. To request a waiver, one of the following conditions shall be met:

(1) The State Board conducts a site visit before the end of the next month the system provides water to the public to determine whether additional monitoring and/or corrective action is necessary to protect public health.

(2) The State Board determines why the sample was total coliform-positive and establishes that the system has corrected the problem or will correct the problem before the end of the next month the system serves water to the public. If a waiver is granted, a system shall collect at least one routine sample before the end of the next month it serves water to the public and use it to determine compliance with Section 64426.1.

Section 64425 (Sample Invalidation) states:
(a) A water supplier may request the Department to invalidate a sample for which a total coliform-positive result has been reported if the supplier demonstrates:

(1) All repeat sample(s) collected at the same tap as the original total coliform-positive sample also are total coliform- positive and all repeat samples collected within five service connections of the original tap are not total coliform-positive; or
(2) The laboratory did not follow the prescribed analytical methods pursuant to §64415(a), based on a review of laboratory documentation by the Department. The supplier shall submit to the Department a written request for invalidation along with the laboratory documentation, the supplier's sample collection records and any observations noted during sample collection and delivery. The water supplier shall require the laboratory to provide the supplier with documentation which shall include, but not be limited to:
(A) A letter from the director of the laboratory having generated the data, confirming the invalidation request by reason of laboratory accident or error;
(B) Complete sample identification, laboratory sample log number (if used), date and time of collection, date and time of receipt by the laboratory, date and time of analysis for the sample(s) in question;
(C) Complete description of the accident or error alleged to have invalidated the result(s);
(D) Copies of all analytical, operating, and quality assurance records pertaining to the incident in question; and
(E) Any observations noted by laboratory personnel when receiving and analyzing the sample(s) in question.

(b) Whenever any total coliform sample result indicative of the absence of total coliforms has been declared invalid by the laboratory due to interference problems as specified at 40 Code Federal Regulations, Section 141.2100(c)(2), the supplier shall collect a replacement sample from the same location as the original sample within 24 hours of being notified of the interference problem, and have it analyzed for the presence of total coliforms. The supplier shall continue to re-sample at the original site within 24 hours and have the samples analyzed until a valid result is obtained.

Section 64426 (Significant Rise in Bacterial Count) states in relevant part:

(a) Any of the following criteria shall indicate a possible significant rise in bacterial count:
(1) A system collecting at least 40 samples per month has a total coliform-positive routine sample followed by two total coliform-positive repeat samples in the repeat sample set;
(2) A system has a sample which is positive for fecal coliform or E. coli; or
(3) A system fails the total coliform Maximum Contaminant Level (MCL) as defined in Section 64426.1.

(b) When the coliform levels specified in subsection (a) are reached or exceeded, the water supplier shall:
(1) Contact the State Board by the end of the day on which the system is notified of the test result or the system determines that it has exceeded the MCL, unless the notification or determination occurs after the State Board office is closed, in which case the supplier shall notify the State Board within 24 hours; and
(2) Submit to the State Board information on the current status of physical works and operating procedures which may have caused the elevated bacteriological findings, or any information on community illness suspected of being waterborne. This shall include, but not be limited to:
(A) Current operating procedures that are or could potentially be related to the increase in bacterial count;
(B) Any interruptions in the treatment process;
(C) System pressure loss to less than 5 psi;
(D) Vandalism and/or unauthorized access to facilities;
(E) Physical evidence indicating bacteriological contamination of facilities;
(F) Analytical results of any additional samples collected, including source samples;
(G) Community illness suspected of being waterborne; and
(H) Records of the investigation and any action taken.

Section 64426.1 (Total Coliform Maximum Contaminant Level (MCL)) states in relevant part:

(b) A public water system is in violation of the total coliform MCL when any of the following occurs:
(1) For a public water system which collects at least 40 samples per month, more than 5.0 percent of the samples collected during any month are total coliform-positive; or
(2) For a public water system which collects fewer than 40 samples per month, more than one sample collected during any month is total coliform-positive; or
(3) Any repeat sample is fecal coliform-positive or E. coli-positive; or
(4) Any repeat sample following a fecal coliform-positive or E. coli-positive routine sample is total coliform-positive.

(c) If a public water system is not in compliance with paragraphs (b)(1) through (4), during any month in which it supplies water to the public, the water supplier shall notify the State Board by the end of the business day on which this is determined, unless the determination occurs after the State Board office is closed, in which case the supplier shall notify the State Board within 24 hours of the determination. The water supplier shall also notify the consumers served by the water system. A Tier 2 Public Notice shall be given for violations of paragraph (b)(1) or (2), pursuant to

section 64463.4. A Tier 1 Public Notice shall be given for violations of paragraph (b)(3) or (4), pursuant to section 64463.1.

Section 64463.1 (Tier 1 Public Notice) states in relevant part:

(a) A water system shall give public notice pursuant to this section and section 64465 if any of the following occurs:

(1) Violation of the total coliform MCL when:

(A) Fecal coliform or E. coli are present in the distribution system; or

(B) When any repeat sample tests positive for coliform and the water system fails to test for fecal coliforms or E. coli in the repeat sample;...

(b) As soon as possible within 24 hours after learning of any of the violations in subsection (a) or being notified by the State Board that it has determined there is a potential for adverse effects on human health [pursuant to paragraph (a)(4), (5), or (6)], the water system shall:

(1) Give public notice pursuant to this section;

(2) Initiate consultation with the State Board within the same timeframe; and

(3) Comply with any additional public notice requirements that are determined by the consultation to be necessary to protect public health.

(c) A water system shall deliver the public notice in a manner designed to reach residential, transient, and nontransient users of the water system and shall use, as a minimum, one of the following forms:

(1) Radio or television;

(2) Posting in conspicuous locations throughout the area served by the water system;

(3) Hand delivery to persons served by the water system; or

(4) Other method approved by the State Board, based on the method's ability to inform water system users.

Section 64463.4 (Tier 2 Public Notice) states:

(a) A water system shall give public notice pursuant to this section if any of the following occurs:

(1) Any violation of the MCL, MRDL, and treatment technique requirements, except:

(A) Where a Tier 1 public notice is required under section 64463.1; or

(B) Where the State Board determines that a Tier 1 public notice is required, based on potential health impacts and persistence of the violations;

(2) All violations of the monitoring and testing procedure requirements in sections 64421 through 64426.1, article 3 (Primary Standards – Bacteriological Quality), for which the State Board determines that a Tier 2 rather than a Tier 3 public notice is required, based on potential health impacts and persistence of the violations;

(3) Other violations of the monitoring and testing procedure requirements in this chapter, and chapters 15.5, 17 and 17.5, for which the State Board determines that a Tier 2 rather than a Tier 3 public notice is required, based on potential health impacts and persistence of the violations; or

(4) Failure to comply with the terms and conditions of any variance or exemption in place.

(b) A water system shall give the notice as soon as possible within 30 days after it learns of a violation or occurrence specified in subsection (a), except that the water system may request an extension of up to 60 days for providing the notice. This extension would be subject to the State Board's written approval based on the violation or occurrence having been resolved and the State Board's determination that public health and welfare would in no way be adversely affected. In addition, the water system shall:

(1) Maintain posted notices in place for as long as the violation or occurrence continues, but in no case less than seven days;

(2) Repeat the notice every three months as long as the violation or occurrence continues. Subject to the State Board's written approval based on its determination that public health would in no way be adversely affected, the water system may be allowed to notice less frequently but in no case less than once per year. No allowance for reduced frequency of notice shall be given in the case of a total coliform MCL violation or violation of a Chapter 17 treatment technique requirement; and

(3) For turbidity violations pursuant to sections 64652.5(c)(2) and 64653(c), (d) and (f), as applicable, a water system shall consult with the State Board as soon as possible within 24 hours after the water system learns of the violation to determine whether a Tier 1 public notice is required. If consultation does not take place within 24 hours, the water system shall give Tier 1 public notice within 48 hours after learning of the violation.

(c) A water system shall deliver the notice, in a manner designed to reach persons served, within the required time period as follows:

(1) Unless otherwise directed by the State Board in writing based on its assessment of the violation or occurrence and the potential for adverse effects on public health and welfare, community water systems shall give public notice by;

(A) Mail or direct delivery to each customer receiving a bill including those that provide their drinking water to others (e.g., schools or school systems, apartment building owners,

or large private employers), and other service connections to which water is delivered by the water system; and

(B) Use of one or more of the following methods to reach persons not likely to be reached by a mailing or direct delivery (renters, university students, nursing home patients, prison inmates, etc.):

1. Publication in a local newspaper;
2. Posting in conspicuous public places served by the water system, or on the Internet; or
3. Delivery to community organizations.

(2) Unless otherwise directed by the State Board in writing based on its assessment of the violation or occurrence and the potential for adverse effects on public health and welfare, noncommunity water systems shall give the public notice by:

(A) Posting in conspicuous locations throughout the area served by the water system; and

(B) Using one or more of the following methods to reach persons not likely to be reached by a public posting:

1. Publication in a local newspaper or newsletter distributed to customers;
2. E-mail message to employees or students;
3. Posting on the Internet or intranet; or
4. Direct delivery to each customer.

Section 64465 (Public Notice Content and Format) states in relevant part:

(a) Each public notice given pursuant to this article, except Tier 3 public notices for variances and exemptions pursuant to subsection (b), shall contain the following:

(1) A description of the violation or occurrence, including the contaminant(s) of concern, and (as applicable) the contaminant level(s);

(2) The date(s) of the violation or occurrence;

(3) Any potential adverse health effects from the violation or occurrence, including the appropriate standard health effects language from appendices 64465-A through G;

(4) The population at risk, including subpopulations particularly vulnerable if exposed to the contaminant in drinking water;

(5) Whether alternative water supplies should be used;

(6) What actions consumers should take, including when they should seek medical help, if known;

(7) What the water system is doing to correct the violation or occurrence;

(8) When the water system expects to return to compliance or resolve the occurrence;

(9) The name, business address, and phone number of the water system owner, operator, or designee of the water system as a source of additional information concerning the public notice;

(10) A statement to encourage the public notice recipient to distribute the public notice to other persons served, using the following standard language: —Please share this information with all the other people who drink this water, especially those who may not have received this public notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this public notice in a public place or distributing copies by hand or mail; and

(11) For a water system with a monitoring and testing procedure violation, this language shall be included: "We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During [compliance period dates], we ['did not monitor or test' or 'did not complete all monitoring or testing'] for [contaminant(s)], and therefore, cannot be sure of the quality of your drinking water during that time." …

(c) A public water system providing notice pursuant to this article shall comply with the following multilingual-related requirements:

(2) For a Tier 2 or Tier 3 public notice:

(A) The notice shall contain information in Spanish regarding the importance of the notice, or contain a telephone number or address where Spanish-speaking residents may contact the public water system to obtain a translated copy of the notice or assistance in Spanish; and

(B) When a non-English speaking group other than Spanish-speaking exceeds 1,000 residents or 10 percent of the residents served by the public water system, the notice shall include:

1. Information in the appropriate language(s) regarding the importance of the notice; or
2. A telephone number or address where such residents may contact the public water system to obtain a translated copy of the notice or assistance in the appropriate language; and

(3) For a public water system subject to the Dymally-Alatorre Bilingual Services Act, Chapter 17.5, Division 7, of the Government Code (commencing with section 7290), meeting the requirements of this Article may not ensure compliance with the Dymally-Alatorre Bilingual Services Act.

(d) Each public notice given pursuant to this article shall:

(1) Be displayed such that it catches people's attention when printed or posted and be formatted in such a way that the message in the public notice can be understood at the eighth-grade level;

(2) Not contain technical language beyond an eighth-grade level or print smaller than 12 point; and

(3) Not contain language that minimizes or contradicts the information being given in the public notice.

Appendix 64465-A. Health Effects Language - Microbiological Contaminants.

Contaminant	Health Effects Language
Total Coliform	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
Fecal coliform/E. coli	Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
Turbidity	Turbidity has no health effects. However, high levels of turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Section 64469 (Reporting Requirements) states in relevant part:

(d) Within 10 days of giving initial or repeat public notice pursuant to Article 18 of this Chapter, except for notice given under section 64463.7(d), each water system shall submit a certification to the State Board that it has done so, along with a representative copy of each type of public notice given.

Section 64481 (Content of the Consumer Confidence Report) states in relevant part:

(g) For the year covered by the report, the Consumer Confidence Report shall note any violations of paragraphs (1) through (7) and give related information, including any potential adverse health effects, and the steps the system has taken to correct the violation.

(1) Monitoring and reporting of compliance data.

APPENDIX 2

United States Department of the Interior

NATIONAL PARK SERVICE
Death Valley National Park
PO Box579
Death Valley, CA 99328

IN REPLY REFER TO:

August 15, 2017

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

Furnace Creek Water System Has Levels of Coliform Bacteria Above the Drinking Water Standard

Our water system recently violated a drinking water standard. Although this is not an emergency, as our customers, you have a right to know what you should do, what happened, and what we did to correct this situation.

We routinely monitor for drinking water contaminants. We took 11 samples to test for the presence of coliform bacteria during August 2017. Two of those samples showed the presence of total coliform bacteria. The standard is that no more than 1 sample per month may test positive.

What should I do?

- **You do not need to boil your water or take other corrective actions.**
- This is not an emergency. If it had been, you would have been notified immediately. Total coliform bacteria are generally not harmful themselves. *Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.*
- Usually, coliforms are a sign that there could be a problem with the system's treatment or distribution system (pipes). Whenever we detect coliform bacteria in any sample, we do follow-up testing to see if other bacteria of greater concern, such as fecal coliform or *E. coli*, are present. **We did not find any of these bacteria in our subsequent testing, and further testing shows that this problem has been resolved.**

TAKE PRIDE IN AMERICA

- People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from U.S. EPA's Safe Drinking Water Hotline at 1(800) 426-4791.

- If you have other health issues concerning the consumption of this water, you may wish to consult your doctor.

What happened? What was done?

Of 11 samples taken, two bacteriological samples tested positive for total coliform but negative for E Coli. Two rounds of follow up testing were conducted and all came back negative to confirm there was no contamination in the system. A risk assessment was conducted by a state health official and the positives were determined to be an isolated instance with the cause undetermined. Investigative report will be submitted to the state.

For more information, please contact Kate Blair at 760-786-3268 or kate_blair@nps.gov

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this public notice in a public place or distributing copies by hand or mail.

Secondary Notification Requirements

Upon receipt of notification from a person operating a public water system, the following notification must be given within 10 days [Health and Safety Code Section 116450(g)]:

- SCHOOLS: Must notify school employees, students, and parents (if the students are minors).

- RESIDENTIAL RENTAL PROPERTY OWNERS OR MANAGERS (including nursing homes and care facilities): Must notify tenants.

- BUSINESS PROPERTY OWNERS, MANAGERS, OR OPERATORS: Must notify employees of businesses located on the property.

This notice is being sent to you by Death Valley National Park Furnace Creek Water System.

State Water System ID#: 1410505. Date distributed: 8/27/2017.

APPENDIX 3. COMPLIANCE CERTIFICATION

Citation Number: 05-13-17C-021

Name of Water System: Death Valley National Park, Furnace Creek

System Number: 1410505

Certification

I certify that the users of the water supplied by this water system were notified of the bacteriological violation of California Code of Regulations, Title 22, Section 64426.1 for the compliance period of AUGUST 2017 and the required actions listed below were completed.

Required Action	Date Completed
(Citation Directive 2) Public Notification Method(s) Used:	August 28, 2017
(Citation Directive 4) Complete and Submit Positive Total Coliform Investigation	August 23, 2017

Signature of Water System Representative

Date

Attach a copy of the public notice distributed to the water system's customers

THIS FORM MUST BE COMPLETED AND RETURNED TO THE STATE BOARD, DIVISION OF DRINKING WATER, NO LATER THAN November 9, 2017

Disclosure: Be advised that the California Health and Safety Code, Sections 116725 and 116730 state that any person who knowingly makes any false statement on any report or document submitted for the purpose of compliance with the Safe Drinking Water Act may be liable for, respectively, a civil penalty not to exceed five thousand dollars ($5,000) for each separate violation or, for continuing violations, for each day that violation continues, or be punished by a fine of not more than $25,000 for each day of violation, or by imprisonment in the county jail not to exceed one year, or by both the fine and imprisonment.

REVISED TOTAL COLIFORM RULE (RTCR) – LEVEL 1 ASSESSMENT
Groundwater with Chemical Removal Treatment

This form is intended to assist public water systems in completing the investigation required by the federal revised Total Coliform Rule (rTCR) [effective April 1, 2016] and may be modified to take into account conditions unique to the water system. **To avoid a violation, an assessment report must be completed and returned to your local regulatory agency no later than 30 days after the trigger date.**

CALIFORNIA Water Boards

ADMINISTRATIVE INFORMATION

Entity Name: DEATH VALLEY NAT'L PARK PWSID NUMBER: 1410505 System Type:	Name FURNACE CREEK	System Address & Email PO Box 579 Death Valley, CA	Telephone Number 760 786 3268
Operator in Responsible Charge (ORC)	TOM BUCK	"	760 786 3264
Person that collected TC samples	Russ Young / Josh Hidalgo	"	760 786 3263
System Owner	Death Valley Nat'l Park		760 786 3263
Certified Laboratory for Microbiological Analyses	Asset Lab	3151 W. Post Rd Las Vegas	702 307 2691
Date Investigation Completed:	6/22/17		
Month(s) of Coliform Treatment Technique Trigger:	August 2017		

INVESTIGATION DETAILS

SOURCE N/A Raw Sample negative.	WELL (name)	WELL (name)	WELL (name)	WELL (name)	COMMENTS (attach additional pages if needed)
1. Inspect each well head for physical defects and report					
a. Is raw water sample tap upstream from point of disinfection?					
b. Is wellhead vent pipe screened?					
c. Is wellhead seal watertight?					
d. Is well head located in pit or is any piping from the wellhead submerged?					
e. Does the ground surface slope towards well head?					
f. Is there evidence of standing water near the wellhead?					
g. Are there any connections to the raw water piping that could be cross-connections? (describe all connections in comments)					
h. Is the wellhead secured to prevent unauthorized access?					
i. To what treatment plant (name) does this well pump?					
j. How often do you take a raw water total coliform (TC) test?					
k. Provide the date and result of the last TC test at this location					

CHEMICAL REMOVAL TREATMENT N/A. Upstream sample at RO plant Negative	PLANT (NAME)	PLANT (NAME)	PLANT (NAME)	PLANT (NAME)	COMMENTS
1. If you provide any chemical removal treatment in addition to disinfection, was there any equipment failure?	Y				RO
a. Have you inspected the chemical treatment units?	Y				-
b. What is the condition of the treatment units?	FAIR				ONE ARRAY OFF LINE FOR SERVICE

APPENDIX 4

REVISED TOTAL COLIFORM RULE (RTCR) – LEVEL 1 ASSESSMENT FORM
Groundwater System with Chemical Removal Treatment

CHEMICAL REMOVAL TREATMENT	PLANT (NAME)	PLANT (NAME)	PLANT (NAME)	PLANT (NAME)	COMMENTS
2. Did you collect a bacteriological quality or HPC sample from the treatment plant?	Y				
3. Do you think the source of bacteriological contamination in the distribution system may be the chemical treatment media/vessels?	N				
4. What actions have you taken or plan to take?					Repeat testing negative
5. Any additional important information?					Sample water is always hot.

CHLORINATION TREATMENT	PLANT (NAME)*	PLANT (NAME)*	PLANT (NAME)*	PLANT (NAME)*	COMMENTS
1. If you provide continuous chlorination treatment, was there any equipment failure?	N				Good Res. dual @ Sample site.
a. Did this result in a loss of chlorine residual at the entry point to distribution system? If Yes, how long?	N				
b. Was emergency chlorination initiated? If Yes, how long?	—				
2. Did the distribution system lose chlorine residual?	N				
3. If you do not provide routine chlorination, was emergency chlorination initiated? If Yes, when?	—				
4. Inspect each point where disinfectant is added and report	—				
a. For hypochlorinator systems	N/A				
1. Is the disinfectant feed pump feeding disinfectant?	N/A				
2. What is the feed rate of disinfectant in ml/minute	N/A				
3. What is the concentration of the disinfectant solution being fed? (percent, or mg/L of chlorine as HOCl)	N/A				
4. By what method was the concentration of solution determined? (ex: measured, manufacturer's literature)	N/A				
5. What is the age (days) of the disinfectant solution currently being used at this treatment location?	N/A				
6. What is the raw water flow rate at the point where disinfectant is added in gallons per minute?	N/A				
7. What is the **total** chlorine residual measured immediately downstream from the point of application?	N/A				
8. What is the **free** chlorine residual measured immediately downstream from the point of application?	N/A				
9. What is the contact time in minutes from the point of disinfectant application to the first customer?	N/A				

*: **The "PLANT" could just be a chlorinator.**

DISINFECTION TREATMENT OTHER THAN CHLORINATION (if any)	PLANT (NAME)	PLANT (NAME)	PLANT (NAME)	PLANT (NAME)	COMMENTS
1. Do you provide any disinfection treatment other than chlorination? If Yes, What type?	N				
2. Was there any equipment failure? If Yes, how long?					
a. Did this result in a loss of disinfectant residual at the entry point to distribution system? If Yes, how long?					
3. Did the distribution system lose disinfectant residual?					
4. Was emergency chlorination initiated?					
If Yes, when?					
5. Inspect each point where disinfectant is added and report:					
6. For **UV** disinfection systems:					
a. Is the UV disinfectant equipment working properly?					
b. What is the UV dosage in milli joules per sq. cm (mJ/cm^{2})?					
c. By what method was the feed rate/residual concentration determined? (ex: measured, manufacturer's literature)					
d. What is the age of the UV lamps currently being used at this treatment location?					
e. What is the raw water flow rate at the point where UV is added?					

STORAGE [illegible] Tank sample Negative N/A	TANK (name)	TANK (name)	TANK (name)	TANK (name)	COMMENTS
1. Is each tank locked to prevent unauthorized access?	Y				
2. Are all vents of each tank screened down-turned to prevent dust and dirt from entering the tank?	Y				
3. Is the overflow on each tank screened?	Y				
4. Are there any unsealed openings in the tank such as access doors, water level indicators hatches, etc.?	N				
5. Is the roof/cover of the tank sealed and free of any leaks.	Y				
6. Is the tank above ground or buried.	buried				
a. If buried or partially buried, are there provisions to direct surface water away from the site.	Y				
b. Has the interior of the tank been inspected to identify any sanitary defects, such as root intrusion?	2015				
7. Does the tank "float" on the distribution system or are there separate inlet and outlet lines?					
8. What is the **measured** chlorine residual (total/free) of the water exiting the	free .7				

REVISED TOTAL COLIFORM RULE (RTCR) – LEVEL 1 ASSESSMENT FORM
Groundwater System with Chemical Removal Treatment

STORAGE	TANK (name)	TANK (name)	TANK (name)	TANK (name)	COMMENTS
storage tank **today**?					
9. What is the volume of the storage tank in gallons?					
10. Is the tank baffled?					
11. Prior to the TC+ or EC+, what was the previous date items #1-7 were checked and documented?					

PRESSURE TANK N/A	TANK (name)	TANK (name)	TANK (name)	TANK (name)	COMMENTS
1. What is the volume of the pressure tank?					
2. What is the age of the pressure tank?					
3. Is the pressure tank bladder type or air compressor type?					
4. Did the pressure tank(s) deviate from normal operating pressure?					
5. Is the compressor pump running more often than normal?					
6. Is the tank bladder(s) is water logged?					
7. Is the tank(s) damaged, rusty, leaking, or has holes?					
8. Was there any recent work performed?					
9. Is the air relief vent (if there is one) on the pressure tank screened and facing downwards?					
10. Can the inside of the pressure tank be visually inspected thru an inspection port? If so, when was the last time it was inspected?					

DISTRIBUTION SYSTEM	SYSTEM RESPONSES
1. What is the minimum pressure you are maintaining in the distribution system?	
2. Did pressure in the distribution system drop to less than 5 psi prior to experiencing the total coliform positive finding.	N
3. Has the distribution system been worked on within the last week? (service taps, hydrant flushing, main breaks, main extensions, etc.) If yes, provide details.	N
4. Are there any signs of excavations near your distribution system not under the direct control of your maintenance staff?	Y – Construction downstream
5. Did you inspect your distribution system to check for mainline leaks? Do you or did you have a mainline leak?	N
6. If there was a mainline leak, when was it repaired?	N
7. On what date was the distribution system last flushed?	

REVISED TOTAL COLIFORM RULE (RTCR) – LEVEL 1 ASSESSMENT FORM
Groundwater System with Chemical Removal Treatment

DISTRIBUTION SYSTEM	SYSTEM RESPONSES
8. Is there a written flushing procedure you can provide for our review?	
9 Do you have an active cross connection control program?	Y
10. What is name and phone number of your Cross-Connection Control Program Coordinator?	Tom Bock 760 786 3264
11. Have all backflow prevention devices in the distribution system been tested annually and if they did not pass, were they repaired/replaced and retested?	Y
12. On what date was the last physical survey of the system done to identify cross-connections?	1/2016

BOOSTER STATION N/A	Response
1. Do you have a booster pump? How many?	
2. Do you have a standby booster pump if the main pump fails?	
3. Prior to bacteriological quality problems, did your booster pump fail?	
4. Do you notice standing water, leakage at the booster station?	

SAMPLE SITE EVALUATION (Complete for all TC+ or EC+ findings)	Routine Site TC+ or EC+	Upstream Site	Downstream Site	Sample 4 (specify)
1. What is the height of the sample tap above grade? (inches)	24		6	
2. Is the sample tap located in an exterior location or is it protected by an enclosure?	EXT			
3. Is the sample tap threaded, have a swing arm (kitchen sink) or aerator (sinks)?	Y		Y	
4. Is the sample tap in good condition, free of leaks around the stem or packing?	N		N	
5. Can the sample tap be adjusted to the point where a good laminar flow can be achieved without excessive splash?	Y		Y	
6. Is the sample tap and area around the sample tap clean and dry (free of animal droppings. other contaminants or spray irrigation systems)	N		Y	
7 Is the area around the sample tap free of excessive vegetation or other impediments to sample collection	Y		Y	
8. Describe how the tap was treated in preparation for sample collection (ran water, swabbed with disinfectant, flamed, etc.)	torched bleached	torched bleached	torch bleach	
9. Is this sample tap designated on the bacteriological sample siting plan (BSSP) as a routine or repeat site?	Y		N	
10. Were the samples delivered to the laboratory in a cooler and within the allowable holding time?	Y		Y	
11. What were the weather conditions at the time of the positive sample (rainy, windy, sunny),	Sunny		Sunny	

REVISED TOTAL COLIFORM RULE (RTCR) – LEVEL 1 ASSESSMENT FORM
Groundwater System with Chemical Removal Treatment

GENERAL OPERATIONS:	Response
1. Has the sampler(s) who collected the samples received training on proper sampling techniques? If yes, please indicate date of last training.	Y
2. Does the water system have a written sampling procedure and was it followed?	Yes. Written procedure. Repeat Sample not taken in correct location according to plan.
3. Where there any power outages that affected water system facilities during the 30 days prior to the TC+ or EC + findings?	N
4. Were there any main breaks, water outages, or low pressure reported in the service area from which TC+ or EC+ samples were collected?	N
5. Does the system have backup power or elevated storage?	
6. During or soon after bacteriological quality problems, did you receive any complaints of any customers' illness suspected of being waterborne? How many?	N
7. What were the symptoms of illness if you received complaints about customers being sick?	N/A

SUMMARY: Based on the results of your assessment and any other available information, what deficiencies do you believe to have caused the positive total coliform sample(s) within your distribution system? *(DO NOT LEAVE BLANK)*

Deficiency #	Deficiency Description
1.	Sampling Technique. Including injector disinfection, not running water (flushing) long enough. Sample not cooled sufficiently/quickly enough., touching lid, are all possibilities.
2.	
3.	
4.	
5.	Sampling Site has 4 way manifold that should be removed before pulling sample. Needs to have valve installed so this can be accomplished.

CORRECTIVE ACTIONS: What actions have you taken to correct the above mentioned deficiencies? If additional time is needed to correct a deficiency, indicate the date that it will be corrected. *(DO NOT LEAVE BLANK)*

Deficiency #	Corrective Action	Completion/Proposed Date
1.	Review Sampling (Routine + Repeat) Procedure w/plan w/staff	
2.	Review Sampling Technique w/ staff.	
3.	Change spigot on sampling plan to a better location.	
4.		
5.		

REVISED TOTAL COLIFORM RULE (RTCR) – LEVEL 1 ASSESSMENT FORM
Groundwater System with Chemical Removal Treatment

CERTIFICATION: I certify under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

NAME: Cathrine L Blair **TITLE:** Acting Utilities Supervisor **DATE:** 8/23/17

Catherine L Blair

Upon review of the Level 1 Assessment Form, the local regulatory agency may require submittal of the following additional information:

- Sketch of system showing all sources, all treatment and chlorination locations, storage tanks, microbiological sampling sites and general layout of the distribution system including the location of all hazardous connections such as the wastewater treatment facility.
- A set of photographs of the source, pressure tanks, and storage tanks in the system may be submitted if they would show that the contamination is directly related and changes have been made since the last inspection by the local regulatory agency.
- Name, certification level and certificate number of the Operator in Responsible Charge.
- Copy of the last cross connection survey performed that identifies the location of all unprotected cross connections.

* Level II Assessment Performed by State Engineer 8/22/17

REVISED TOTAL COLIFORM RULE (RTCR) – LEVEL 2 ASSESSMENT

This form is intended to assist Division of Drinking Water (DDW) or Local Primacy Agency (LPA) Staff in completing the investigation required by the federal revised Total Coliform Rule (rTCR) [effective April 1, 2016]. If the answer has a large box around it, it is an issue and needs to be described by LPA or DDW in the next column. Please include the question number in the description. The PWS must address each issue described in the Corrective Action column. **To avoid a violation, the water system must submit to DDW/LPA a completed assessment report no later than 30 days after the trigger date.**

PWS ID#:1410505 PWS Name: NPS Furnace Creek Circle one: CWS / NTNC / TNC

Operator in Responsible Charge (print name): TOM BUCK Phone: (760) 786-3264

Assessment trigger date: August 1, 2017 Date Assessment Completed: August 22, 2017

SEASONAL: YES ☐ NO ☒ * ~~JASON LIEBER~~ RUSS YOUNG Reason for Assessment: Second Level 1 in rolling 12-month period [40 CFR 141.859(a)(2)(ii)]

Person who collected TC positive samples: ~~JOSH HIDALGO~~ Contact info for person who collected samples: TOM BUCK (760) 786-3264

Name of Certified Lab conducting sample analysis: ASSET LABS – LAS VEGAS AINSLEY HOLEST (760) 786-3261

Assessment Elements	Y	N	N/A	Issue Description	Corrective Action Taken or Planned to be Taken and Date
1. Review of the sample sites	**Y**	**N**	**N/A**	**Indicate Element number being described.**	**Indicate Element number being described.**
1.1 Was the sample taken at the routine coliform site? List the name(s) of the positive sample site(s).	☒	☐	☐	1.1 – SITE 5 GULCH	
1.2 Was the tap area unsanitary at the time of sampling?	☐	☐	☐	1.3 HOSE BIB	
1.3 Was this sample taken from an outside faucet?	☒	☐	☐		
1.4 Was the sample taken from a swivel tap?	☐	☒	☐	1.9 FIRST OFF STORAGE TANK.	
1.5 Did the tap have a point of use treatment device on it?	☐	☒	☐		
1.6 Does the building where the sample was taken have a point of entry device?	☐	☒	☐	1.8 SAMPLE ~~HAS~~ MANY CONNECTIONS (SEE PICTURES) ORIGINAL ROUTINE. REPEAT SITE MAY NOT BE APPLICABLE.	1.8 CONSIDER CHANGING SAMPLE SITE. UPDATE BACTI PLAN. DUE OCTOBER 10, 2017
1.7 Has this location undergone any plumbing replacements or repairs?	☐	☒	☐		
1.8 Are there any possible cross connections around the sample site (including yard hydrants and stock tanks)?	☒	☐	☐		
1.9 Is this location near a storage tank or dead end?	☒	☐	☐		
1.10 Have there been any analytical results or any additional samples collected, including source samples, which were positive (not for compliance)?	☐	☒	☐		
1.11 Prior to this incident, when was the most recent satisfactory coliform samples taken? Date:	JULY 2017				
1.12 Any other sample site issues not previously mentioned?	☒	☐	☐	1.12 SAMPLE ~~SITES~~ ~~OUTSIDE~~ SITES OUTSIDE.	

* 8/23/17 PER KATE BLAIR

APPENDIX 5

REVISED TOTAL COLIFORM RULE (RTCR) – LEVEL 2 ASSESSMENT

2. Review of sample protocol	Y	N	N/A	Indicate Element number being described.	Indicate Element number being described.
2.1 Was the positive sample(s) taken by the operator in responsible charge? Provide name of sampler.	☐	☒	☐	2.1* ~~JASON LIEBER~~ RUSS YOUNG AND JOSH HIDALGO	2.5 REVIEW SAMPLING PROCEDURES
2.2 Is the sampler a regular, trained sampler?	☒	☐	☐		
2.3 Was a laboratory-provided TC sample bottle used?	☒	☐	☐		DUE OCTOBER 10, 2017
2.4 Was the aerator removed?	☐	☒	☐	2.4 HOSE CONNECTION	
2.5 Was the water tap flushed for at least 5 minutes?	☐	☒	☐	2.5 ~~5~~ FLUSH UNTIL RESIDUAL PRESENT. ~30 SECONDS.	
2.6 Was the tap disinfected or flamed?	☒	☐	☐	2.6 CHLORINE FLUSHED	
2.7 Did the sample get too warm prior to being placed on ice?	☐	☒	☐		
2.8 Were there other sampler errors? Describe	☐	☒	☐		
2.9 If it is a seasonal system, were there any problems during the most recent start-up procedure?	☐	☐	☒		
2.10 Any other sample protocol issues not previously mentioned (e.g. vandalism or unauthorized access)?	☐	☐	☒		

3. Review of the distribution system.	Y	N	N/A	Indicate Element number being described.	Indicate Element number being described.
3.1 Have any mains or service lines recently been repaired, replaced or installed?	☐	☒	☐	3.1 CONSTRUCTION DOWNSTREAM	
3.2 Have fire hydrants or blow offs been recently flushed/used/sheared?	☐	☒	☐	3.2 HYDRANT DOWNSTREAM	
3.3 Have valves been recently exercised to direct flow?	☐	☒	☐	3.3 DOWNSTREAM VALVES	
3.4 Any leaks or main breaks noted?	☐	☒	☐	3.4 NO VISIBLE LEAKS	
3.5 Are all of the backflow prevention devices operational and maintained?	☐	☐	☒	3.5 NO BACKFLOW AT SERVICE	
3.6 Was there a total loss of pressure, low pressure (<20 psi) or changes in water pressure? If yes, when?	☒	☐	☐		
3.7 Any areas of the distribution with low disinfectant levels (<0.2 mg/L)?	☐	☒	☐		
3.8 Any recent pump station failures or repairs?	☐	☐	☒		
3.9 Air relief valve leaking?	☐	☒	☐		
3.10 Standing water or debris in (air relief) valve vault?	☐	☐	☒		
3.11 Any recent power loss?	☐	☐	☒		
3.12 Any unprotected cross connections (including yard hydrants and stock tanks)?	☐	☒	☐	3.12 DRIP IRRIGATION NO PROTECTION	
3.13 Has high turbidity been detected in the distribution system?	☐	☐	☒		
3.14 Is there evidence of intentional contamination or vandalism?	☐	☒	☐		
3.15 Any other distribution issue not previously mentioned (e.g. other O&M activities that could have introduced coliforms)?	☐	☒	☐		

* 8/23/17 PER KATE BLAIR

REVISED TOTAL COLIFORM RULE (RTCR) – LEVEL 2 ASSESSMENT

4.	Review of storage tank(s) (Note the specific facility if any issues are found)	Y	N	N/A	Indicate Element number being described.	Indicate Element number being described.
4.1	Is there a presence of animals or insects in the tank(s)?	☐	☒	☐	4 – ALL – STORAGE NOT LOOKED AT IN FOLLOW UP INVESTIGATION. TANK INSPECTED IN 2016 SANITARY SURVEY AND NO SIGNIFICANT ISSUES FOUND.	
4.2	Are there breaches or holes of any sort into tank(s)?	☐	☒	☐		
4.3	Is there any presence of animal droppings around openings, vents or overflows?	☐	☐	☐		
4.4	Is there sediment buildup and floating debris in tank(s)?	☐	☐	☐		
4.5	Have the tank(s) been cleaned within the last 5 years? If not, list when it was last cleaned.	☒	☐	☐		
4.6	Are the vents and overflows protected against entry from animals, insects or other contaminants?	☒	☐	☐		
4.7	Are the screens damaged or not properly installed?	☐	☒	☐		
4.8	Does the reservoir have a common inlet/outlet?	☐	☒	☐		
4.9	Is the overflow pipe directly connected to a tank drain, sanitary sewer or storm drain?	☐	☒	☐		
4.10	Does the hatch have a solid, water proof, shoebox type lid that is properly sealed?	☒	☐	☐		
4.11	Was the hatch locked or secured?	☒	☐	☐	4.1 TANK SCREENED & LOCKED.	
4.12	Has the tank been accidently drained?	☐	☒	☐		
4.13	Have there been high flows through the tank?	☐	☒	☐	4.14 TURNOVER 5 DAYS	
4.14	Was there high water age in the tank (infrequent water use)?	☐	☒	☐		
4.15	Was the sample taken when the tank was at the low level mark?	☐	☒	☐		
4.16	Failure or improper operation on tank telemetry/altitude valves/controls?	☐	☒	☐		
4.17	Any recent repairs on the tank(s)?	☐	☒	☐		
4.18	Was there any power loss?	☐	☐	☒		
4.19	Is the site secured (e.g. fencing, locked gates, etc.)?	☒	☐	☐		
4.20	Was the tank vandalized or subject to tampering?	☐	☒	☐		
4.21	Any other storage tank issues not previously mentioned above?	☐	☒	☐		
	Pressure Tanks (if applicable)	**Y**	**N**	**N/A**	**Indicate Element number being described.**	**Indicate Element number being described.**
4.22	What is the volume of the pressure tank? Attach additional sheets if needed.	N/A			4.22 – 4.31 NO PRESSURE TANKS	
4.23	What is the age of the pressure tank? Attach additional sheets if needed.	N/A				
4.24	Does the pressure tank use a bladder and/or air compressor? Attach additional sheets if needed.	N/A				
4.25	Did the pressure tank(s) deviate from normal operating pressure?	☐	☐	☒		
4.26	Is the compressor pump running more than normal?	☐	☐	☒		

REVISED TOTAL COLIFORM RULE (RTCR) – LEVEL 2 ASSESSMENT

4.27	Is the tank bladder water logged?	☐	☐	☒		
4.28	Is the tank damaged, rusty, leaking or have holes?	☐	☐	☒		
4.29	Was there any recent work performed on the tank?	☐	☐	☒		
4.30	Is the air relief vent (if there one) screened and facing down?	☐	☐	☑		
4.31	Can the inside of the pressure tank be visually inspected through an inspection port? If so, when was it last inspected?	☐	☐	☒		
5.	**Review of treatment process (if applicable)**	**Y**	**N**	**N/A**	**Indicate Element number being described.**	**Indicate Element number being described.**
5.1	Has the treatment been bypassed altogether at any time or have individual processes been interrupted by power outages or other causes? If yes, provide details on when, which processes and for how long?	☐	☒	☐	5.3 – ONE RO ARRAY OFFLINE FOR REPAIR OF SEALS. NOT AFFECTING.	
5.2	Have there been any new treatment processes added or new equipment installed?	☐	☒	☐		
5.3	Have there been any recent repairs of major unit processes or treatment equipment?	☒	☐	☐		
5.4	Have there been any changes in the operational procedures used for treating the water such as, changes in chemical dosages, flow changes, or changes in coagulant chemicals used? If yes, provide details of the change and when it occurred.	☐	☒	☐		
5.5	Has a coagulant been added at all times the plant has been filtering water?	☐	☐	☒		
5.6	Have there been changes in raw water quality?	☐	☒	☐		
5.7	Was the settled water turbidity increasing?	☐	☐	☒		
5.8	Was the finished water turbidity increasing?	☐	☐	☒		
5.9	Have filter clogging algae caused more frequent backwashing?	☐	☐	☒		
5.10	Have there been any failures in adding disinfectant for any length of time?	☐	☒	☐		
5.11	Was water delivered that did not meet CT requirements?	☐	☐	☒		
5.12	What is the entry point chlorine residual today? Free/Total?	mg/L				
5.13	Has there been any vandalism or tampering at the plant?	☐	☒	☐		
5.14	Any other treatment plant issues not previously mentioned above?	☐	☒	☐		
6.	**Sources – Well(s) (Note the specific facility if any issues are found)**	**Y**	**N**	**N/A**	**Indicate Element number being described.**	**Indicate Element number being described.**
6.1	Is there a 50 foot annular seal?	☐	☐	☒	6 – 2016 SANITARY SURVEY ALL NO ISSUES FOUND AND	
6.2	Is the surface seal defective or damaged or not water tight?	☐	☐	☒		

REVISED TOTAL COLIFORM RULE (RTCR) – LEVEL 2 ASSESSMENT

6.3	Is there a casing vent?	☐	☐	☒	NO CHANGES. TO SOURCES. SOURCES DETERMINED TO NOT BE SOURCE OF	
6.4	Does the casing and/or air relief vent have a screen to prevent the entry of insects?	☐	☐	☒		
6.5	Does the vent and pump to waste terminate in an air gap of at least three pipe diameters above the ground?	☐	☐	☒		
6.6	How is the well used? (Circle if applicable)	Primary		Backup	Emergency	
6.7	Are there any unprotected cross connections at the wellhead?	☐	☐	☒	POSITIVE COLIFORM.	
6.8	Are there any unprotected openings in the pump or pump assembly?	☐	☐	☒		
6.9	Is the pitless adapter damaged?	☐	☐	☒		
6.10	Are there any exposed holes or cracks near the wellhead? For example electric conduit.	☐	☐	☒		
6.11	Has there been any recent work performed on the pump?	☐	☐	☒		
6.12	Is the wellhead secured to prevent unauthorized access?	☐	☐	☒		
6.13	Have there been any sewer spills, source water spills or other disturbances near the well?	☐	☐	☒		
6.14	Is the wellhead at least 18-inches above grade?	☐	☐	☒		
6.15	Is there evidence of standing water near the wellhead?	☐	☐	☒		
6.16	Is the well pit in standing water or evidence of flooding?	☐	☐	☒		
6.17	Any other well issues not previously mentioned above?	☐	☐	☒		
	Sources- Spring(s) **(Note the specific facility if any issues are found)**	**Y**	**N**	**N/A**		
6.18	Is there evidence of flooding or infiltration of surface water runoff around the spring?	☐	☐	☒	6.18–6.22 NO SPRINGS	
6.19	Is the spring box improperly developed or poorly maintained?	☐	☐	☒		
6.20	Is the spring site secured (e.g. locks, fence, gate, etc).	☐	☐	☒		
6.21	Are there dead animals near the spring?	☐	☐	☒		
6.22	Any other issues about springs not previously mentioned above?	☐	☐	☒		
	Sources – Surface Water	**Y**	**N**	**N/A**		
6.23	Have there been algae blooms?	☐	☐	☒	6.23–6.29 NO SURFACE WATER	
6.24	Has the source water turned over?	☐	☐	☒		
6.25	Have there been any sewer spills, source water spills or other disturbances?	☐	☐	☒		
6.26	Any other source water issues not previously mentioned above?	☐	☐	☒		

REVISED TOTAL COLIFORM RULE (RTCR) – LEVEL 2 ASSESSMENT

	Sources-purchased water					
6.27	Water quality issues with supplier?	☐	☐	☒		
6.28	Low disinfectant residual from supplier (typically ≤0.2 mg/L)?	☐	☐	☒		
6.29	Any other purchased water issues not previously mentioned above?	☐	☐	☒		
	Applicable to all sources					
6.30	Has an unapproved source been used?	☐	☐	☒		
6.31	Has there been a change in sources?	☐	☐	☒		
6.32	Has there been recent rapid snowmelt, heavy rainfall or flooding?	☐	☐	☒		
6.33	Any evidence of animals near the source?	☐	☐	☒		
6.34	Have there been changes in available source water (e.g. significant drop in water table, reservoir capacity)	☐	☐	☒		
6.35	Is the source water sample for ground water systems E. coli positive? This may indicate that the positive sample is originating from the source and may be a continuous source of contamination.	☐	☐	☒		
6.36	Any other source issues not previously mentioned above?	☐	☐	☒		
7.	**General Operations**				**Indicate Element number being described.**	**Indicate Element number being described.**
7.1	During or soon after bacteriological quality problems, did you receive any complaints of any customers' illness suspected of being waterborne? How many?	☐	☒	☐		
7.2	What were the symptoms of illness if you received complaints about customers being sick?	N/A				
7.3	Were there any extreme weather/natural events (e.g. heat, freezing, raining, windy, fires, earthquakes etc)	☒	☐	☐	HEAT – DEATH VALLEY 115°-120°F	
8.	**Significant Deficiencies**				**Indicate Element number being described.**	**Indicate Element number being described.**
8.1	Are there any unaddressed significant deficiencies? This may indicate that the problem is known and is in the process of being remedied. Include approved corrective action date and status of each corrective action.	☐	☒	☐	2016 DEFICIENCY LIST IDENTIFIED TRAINING FOR BACTI SAMPLING WHICH WAS DONE BUT MAY NEED TO REPEAT.	REPEAT SAMPLING TRAINING DUE OCTOBER 10, 2017

1. Attach additional sheets if needed.

REVISED TOTAL COLIFORM RULE (RTCR) – LEVEL 2 ASSESSMENT

Additional Comments: 2016 DEFICIENCY LIST ATTACHED.
PICTURES ATTACHED

Name of SWRCB-Division of Drinking Water ~~or LPA~~ representative completing the form (PRINTED): Andrés Aguirre / SWRCB-DDW

Signature: _____ Date: 8/22/2017

Water system responsible party (PRINTED): CATHRINE L BLAIR

Signature: Catherine L Blair, Acting Utilities Supervisor Date: 8/22/17

Reserved for Regulatory Agency (DDW / LPA) Review

	Yes	No	Comments
1. Has assessment been successfully completed?	☒	☐	LEVEL 1
2. Likely reason for EC+ occurrence has been found.	☐	☐	N/A
3. System has corrected the problem.	☒	☐	UNDETERMINED, SEVERAL POSSIBLE CAUSES.
4. Were all issues identified corrected?	☐	☐	WILL FOLLOW-UP
4. Corrective Action Approved?	☐	☐	WILL FOLLOW-UP IN CITATION

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF DRINKING WATER

2016 DEFICIENCY LIST

System Name: Death Valley National Park – Furnace Creek **System No.** 1410505
Source of Information: Sanitary Survey
Updated by: Andrés Aguirre /SWRCB-DDW **Date:** November 30, 2016

Date Found	DESCRIPTION OF DEFICIENCY	Order of Hazard	Date Corrected Reported	Date Corrected Confirmed
	SOURCES:			
11/30/16	**Flooding Protection for Monitoring Wells Near Well 3:** There are several monitoring wells around Well 3 that are near a USGS Flood Mark. Wellheads should be a minimum 18 inches above grade, which all appeared to meet, or the highest known flood level. Please verify wellheads are adequately sealed and above flood level.	D		
	STORAGE:			
11/30/16	**2.0 MG Reservoir Exterior Evaluation:** On southwest side of tank there is some spalling with rebar showing but this appears to be on the roof lip only. Recommend NPS verify that no runoff can enter tank and to monitor condition and address as needed. On west side of tank some ground cover was removed. Recommend to restore to installed condition.	N/A		
	MONITORING AND REPORTING:			
11/30/16	**Quarterly Maximum Residual Disinfectant Level (MRDL) reports:** Please submit MRDL report with system chlorine running annual averages.	D		
11/30/16	**Review procedures for positive coliform:** NPS needs to review procedures to ensure all staff is knowledgeable on procedures following a positive coliform result.	C	DECEMBER 2016	
11/29/16	**Consumer Confidence Report Content:** The consumer confidence report issued in 2015 did not include all required content. Please ensure Consumer Confidence Report for year 2016 includes all required content from Title 22, CCR, Section 64481. Templates for small systems are available at the following link. http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/CCR.shtml	C		

Date Found	DESCRIPTION OF DEFICIENCY	Order of Hazard	Date Corrected Reported	Date Corrected Confirmed
	MANAGEMENT/OPERATIONS			
11/30/16	**Valve and Fire Hydrant Exercise Program:** A valve exercise program should be implemented for the park. An atlas/valve mapping should be developed to allow tracking of individual valve number, size, location, number of turns to close, position, date exercised, and operator.	D		
	INFORMATION REQUESTED:			
11/30/16	**Pressure Regulating Valve Information:** Please submit information on pressure regulating valves in the system. A sample form is included with the inspection report.	N/A		

Shaded areas indicate past deficiencies that have been corrected and verified by the Division.

ORDER OF HAZARD
A. CRITICAL HEALTH HAZARD - CORRECTIVE ACTION MUST BE TAKEN IMMEDIATELY
B. SERIOUS HEALTH HAZARD - ACTION MUST BE TAKEN AS SOON AS POSSIBLE
C. POTENTIAL HEALTH HAZARD - MUST BE CORRECTED AS WORK LOAD PERMITS
D. SYSTEM OR OPERATIONAL DEFECT RESULTING IN POOR WATERWORKS PRACTICE
N/A. NOT APPLICABLE OR RECOMMENDATION

Level 2 Assessment Revised Total Coliform Rule Investigation Photos

Death Valley National Park, Furnace Creek

August 22, 2017

Photo 1: Routine Sample Site 5 – Gulch.

This was routine sample site that was total coliform positive, *E.coli* absent on 8/2/2017. Note 4-way flow splitter, from left to right, 1. drip irrigation without backflow protection, 2. garden hose with no hose-bib vacuum breaker, 3. sample tap with small hose attached, and 4. Second drip irrigation line with no backflow protection.

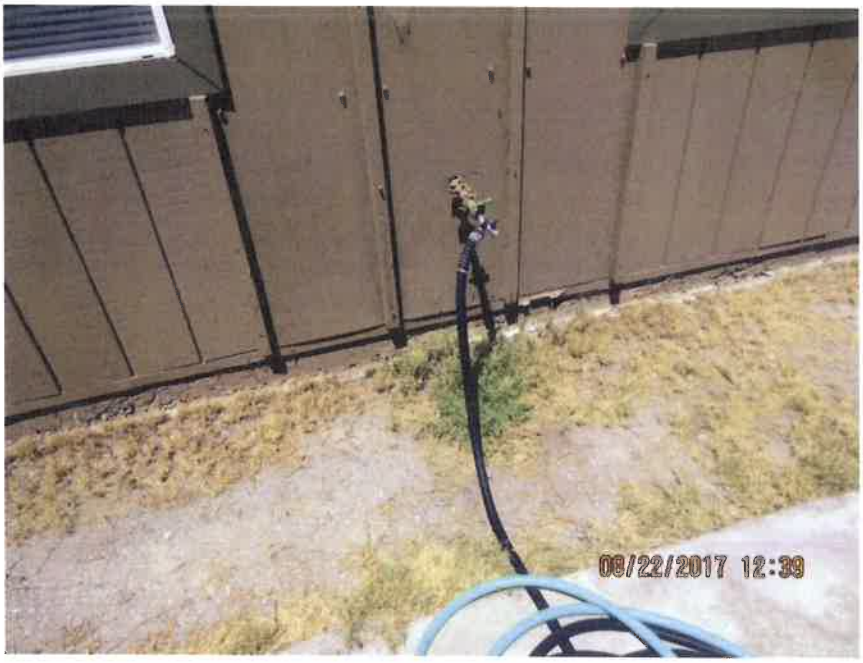
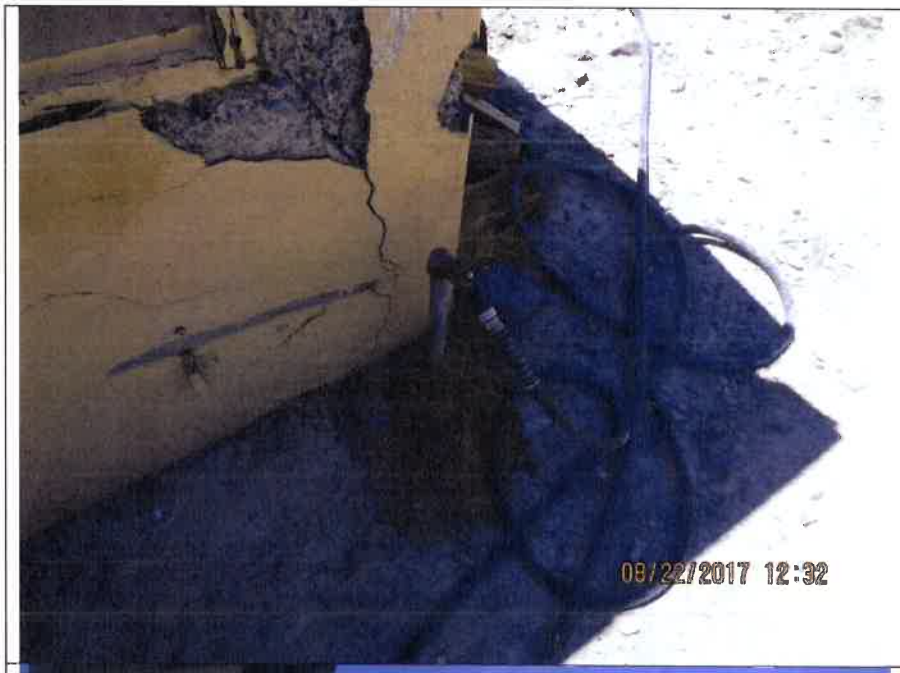


Photo 2: Possible replacement sample tap for Site 5. Note no hose bib vacuum breaker on hose line.

Sample taps should be one that is in frequent use, clean, at least 18 inches above ground and discharge downward and not near shrubbery. Samples should be collected from outside hose bib nearest to the main and service line to main as short as possible. It is not recommended to sample from hose bib with threads. Tap should be flushed for 5 minutes, longer with hose.

Level 2 Assessment Revised Total Coliform Rule Investigation Photos
Death Valley National Park, Furnace Creek
August 22, 2017

	Photo 3: Downstream repeat sample site for Site 5. This site was not on approved bacteriological monitoring plan. This site was the second site that tested positive for total coliform, absent *E.coli* on 8/3/2017. No hose-bib vacuum breaker on hose.
	Photo 4: New construction by Xanterra downstream of positive sample sites.

State Water Resources Control Board
Division of Drinking Water
464 W 4th Street
San Bernardino, CA 92401
(909)383-4328

Small Water System Bacteriological Sampling Plan and Groundwater Rule Sampling Plan

I. System Information:

System or Facility Name: **Furnace Creek Water System - Death Valley National Park**

Service connections: **81**
(Number of residences and/or buildings served by the system)

Population: **150**
(Number of individuals served each day by system during busiest month)

Source(s): **Well #1, Well #2, Well #3**
(List all water supply sources – wells and/or springs)

II. Routine Sampling Frequency

The water system must collect **5** routine sample at a frequency of once every **month**

III. Routine and Repeat Sampling Sites

***Routine sample site No. 1: Timbisha Indian Reservation Tribal Office Building**
*This site must be representative of the distribution system and shall not be designated as a water source (i.e. well, etc.).

If this routine sample contains coliform bacteria, the water system must collect a set of repeat samples within 24 hours of being notified of the result. (If your routine sampling frequency is equal to or less than one sample per month, the repeat sample set must consist of **4** samples. If your routine sampling frequency is greater than one sample per month, the repeat sample set need only consist of **3** samples.)

Repeat Sample Set (No. 1)

Repeat sample site No. 1: Tribe Office Building
(Collect one sample at the original routine sample site)

Repeat sample site No. 2: Texas Spring CG Upper Loop
(Collect one sample within five connections upstream)

Repeat sample site No. 3: N/A
(Collect one sample within five connections downstream)

Repeat sample site No. 4: Furnace Creek Maintenance Garage "Dolly's Shed"
(Collect one additional sample in the distribution system)

Ground water[v] Triggered Source Sample(s)[4]: Blended Raw at FC RO Plant (Identify Sources)
(Collect one sample for *E. coli* from each ground water source on line at the time of the routine total coliform-positive sample result)

If you purchase water from another water system, you must contact the water system from which you purchase water within 24 hours of being notified of a routine total coliform positive sample result.
Name of wholesaler contact: N/A

Phone number of wholesaler contact: _____

* A routine sample site must be designated for each pressure zone or separate area served by the water system. The routine sample sites must be rotated such that they are all sampled on a regular basis. If this water system must designate more than one routine sample site, please do so on the following page.

[v] Systems with ground water sources must take "triggered source samples" in response to positive routine total coliform sample results in the distribution system.

Check one of the following:

☐ Only one routine sample site is necessary to adequately represent the system. Additional routine and repeat sample sites *are not* attached.

☒ This water system contains more than one pressure zone or separate area. Additional routine and repeat sample sites *are* attached.

Routine Sample Site No. 2: Furnace Creek Ranch Post Office

This site must be representative of the distribution system and shall not be designated as a water source (i.e. well, etc.).

If this routine sample contains coliform bacteria, the water system must collect a set of repeat samples within 24 hours of being notified of the result. (If your routine sampling frequency is equal to or less than one sample per month, the repeat sample set must consist of **4** samples. If your routine sampling frequency is greater than one sample per month, the repeat sample set need only consist of **3** samples.)

Repeat Sample Set No. 2:

Repeat sample site No. 1: Post Office
(Collect one sample at the original routine sample site)

Repeat sample site No. 2: Hwy190 Dump Station
(Collect one sample within five connections upstream)

Repeat sample site No. 3: Tribe Office Building
(Collect one sample within five connections downstream)

Repeat sample site No. 4: _____
(Collect one additional sample in the distribution system)

Groundwater[v] Triggered Source Sample(s): Blended Raw at FC RO Plant (Identify Sources)
(Collect one sample for *E. coli* from each ground water source on line at the time of the routine total coliform-positive sample result)

If you purchase water from another water system, you must contact the water system from which you purchase water within 24 hours of being notified of a routine total coliform positive.

Routine Sample Site No. 3: Furnace Creek Maintenance Garage "Dolly's Shed"

This site must be representative of the distribution system and shall not be designated as a water source (i.e. well, etc.).

If this routine sample contains coliform bacteria, the water system must collect a set of repeat samples within 24 hours of being notified of the result. (If your routine sampling frequency is equal to or less than one sample per month, the repeat sample set must consist of **4** samples. If your routine sampling frequency is greater than one sample per month, the repeat sample set need only consist of **3** samples.)

Repeat Sample Set No. 3:

Repeat sample site No. 1: Furnace Creek Maintenance Garage "Dolly's Shed"
(Collect one sample at the original routine sample site)

Repeat sample site No. 2: Sunset Campground Dump Station
(Collect one sample within five connections upstream)

Repeat sample site No. 3: Furnace Creek Campground Restroom #4 Breezeway
(Collect one sample within five connections downstream)

Repeat sample site No. 4: _____
(Collect one additional sample in the distribution system)

[v] Systems with ground water sources must take "triggered source samples" in response to positive routine total coliform sample results in the distribution system.

Groundwater[v] Triggered Source Sample(s): Blended Raw at FC RO Plant (Identify Sources)
(Collect one sample for *E. coli* from each ground water source on line at the time of the routine total coliform-positive sample result)

If you purchase water from another water system, you must contact the water system from which you purchase water within 24 hours.

Routine Sample Site No. 4: Texas Spring Campground Upper Loop

This site must be representative of the distribution system and shall not be designated as a water source (i.e. well, etc.).

If this routine sample contains coliform bacteria, the water system must collect a set of repeat samples within 24 hours of being notified of the result. (If your routine sampling frequency is equal to or less than one sample per month, the repeat sample set must consist of **4** samples. If your routine sampling frequency is greater than one sample per month, the repeat sample set need only consist of **3** samples.)

Repeat Sample Set No. 3:

Repeat sample site No. 1: Texas Spring Campground Upper Loop
(Collect one sample at the original routine sample site)

Repeat sample site No. 2: Treated Tank Water Bib in Old CL2 Room
(Collect one sample within five connections upstream)

Repeat sample site No. 3: Texas Springs Campground Lower Loop
(Collect one sample within five connections downstream)

Repeat sample site No. 4: _____
(Collect one additional sample in the distribution system)

Groundwater[v] Triggered Source Sample(s): Blended Raw at FC RO Plant (Identify Sources)
(Collect one sample for *E. coli* from each ground water source on line at the time of the routine total coliform-positive sample result)

Routine Sample Site No. 5: Furnace Creek Inn Apartments "The Gulch" North side Bib

This site must be representative of the distribution system and shall not be designated as a water source (i.e. well, etc.).

If this routine sample contains coliform bacteria, the water system must collect a set of repeat samples within 24 hours of being notified of the result. (If your routine sampling frequency is equal to or less than one sample per month, the repeat sample set must consist of **4** samples. If your routine sampling frequency is greater than one sample per month, the repeat sample set need only consist of **3** samples.)

Repeat Sample Set No. 3:

Repeat sample site No. 1: The Gulch (front parking area)
(Collect one sample at the original routine sample site)

Repeat sample site No. 2: Treated Tank Water Bib in Old CL2 Room
(Collect one sample within five connections upstream)

Repeat sample site No. 3: Post Office*
(Collect one sample within five connections downstream)

Repeat sample site No. 4: _____
(Collect one additional sample in the distribution system)

Groundwater[v] Triggered Source Sample(s): Blended Raw at FC RO Plant (Identify Sources)
(Collect one sample for *E. coli* from each ground water source on line at the time of the routine total coliform-positive sample result)

*Downstream should be at Furnace Creek Inn Complex currently under construction. Scheduled to open Summer 2018. This site will serve as downstream repeat sample site until a closer site can be accessed.

IV. Sampling During The Month Following A Positive Sample

If one or more samples are positive for total coliform in a month, the water system is required to collect five routine samples during the following month. These five samples can be collected over the course of the month or all on the same day. Please list the locations from which these extra samples would be collected:

1. N/A 2. _____ 3. _____

4. _____ 5. _____

V. Map or Diagram

Attach an 8.5" x 11" map or diagram showing the location of routine and repeat sample sites, the well(s), and the entry point of water into the distribution system.

VI. Personnel and Laboratory Notification

Sampler: **Jason Lieber, Mark Cooley, Josh Hidalgo, Russ Young, Tom Buck**
(Sample collection must be performed by a person trained in sample collection. Provide name of sampler.)

Laboratory: **Asset Lab (702)307-2659 Wetlab (702)475-8899**
(Provide the name and phone number of the certified lab doing your water analysis. Arrangement must be made for weekend and holiday analysis if needed.)

Notification: Laboratory to notify persons designated below within 24 hours whenever a sample is found to contain coliform bacteria:

1.	**Tom Buck**	**(760)786-3264 day** **(775)513-9330 eve**	
	(Name)	(Daytime Phone #)	(Evening Phone #)
2.	**Ainsley Holeso**	**(760)786-3261 day** **(760)878-8126 eve**	
	(Name)	(Daytime Phone #)	(Evening Phone #)
3.	**Frank Lambert**	**(760)786-3268 day** **(775)253-4877 eve**	
	(Name)	(Daytime Phone #)	(Evening Phone #)

VII. Notification of the Department

The water system will notify the State Water Resources Control Board, Division of Drinking Water Sonoma District Office, within 24 hours whenever a sample contains fecal coliform or *E. coli* bacteria or whenever a follow-up sample is positive.

San Bernardino District 13 Office: (909) 383-4308

Andres Aguirre, Sanitary Engineer:

Submitted by: Kate Blair Date 9/11/17

KEEP A COPY OF THIS FORM FOR YOUR REFERENCE AND USE

* Systems with ground water sources must take "triggered source samples" in response to positive routine total coliform sample results in the distribution system.

ADDITIONAL INFORMATION

When responding to a laboratory report of bacterial contamination, keep in mind the following:

1. Coliform bacteria should not be present in drinking water and the presence of coliform indicates a potentially serious problem. Appropriate investigation should be performed immediately.
2. Check water system components such as water sources, filtration and/or chlorination equipment and storage tanks for indications of unusual conditions or problems.
3. Correct problems immediately. Do not wait for results of follow-up samples to take action.
4. **If a triggered source sample result is E. coli-positive, the system must conduct Tier 1 notification and collect five (5) additional source samples within 24 hours of being notified of the *E. coli*-positive sample result.**
5. Templates for many public notifications are available at the SWRCB website: http://www.swrcb.ca.gov/drinking_water/certlic/drinkingwater/Notices.shtml

Death Valley National Park

Utilities Crew Special Meeting

September 8, 2017 6:00 am

Agenda

I. Pool Maintenance SOP

- Hazard Analysis
- PPE
- MSDS for Pool Tabs/ T Chlor
- First Aid for Exposure
- SOP for reading recording residuals at pool
- SOP for adding chlorine tabs
- Daily /Weekly/Monthly Tasks

II. Sampling Procedures Review

- Level II Assessment Review
- Public Notice Review
- New Sample Site Plan Review
- Sampling Technique Review

III. Respirator Fitting

Attendees: Name / title

1. Kate Blair, acting Supervisor
2. Mark Cooley operator
3. [signature] operator, Lead
4. Jason Lieber OPERATOR
5. [signature]
6. Reviewed materials 9/10 w/ Russ Young x [signature]

Attendees: Kate Blair, Mark Cooley, Tom Buck, Jason Lieber, Josh Hidalgo

SAMPLING FOR BIOLOGICAL CONTAMINANTS

Total coliforms; Fecal coliforms; *E. coli*;
Enterococci; Heterotrophic Bacteria; or Coliphage

Bottle to Use

Sterile 125 or 150 mL plastic bottles must be used.

Holding Times: 8 hours for Source Water /30 hours for Drinking Water

Sampling Instructions:

The day before flush sample site until a residual of .2 or greater is reached!

Remove hoses or attachments

Wear Gloves

Do not rinse bottles

Run water 5 minutes or longer until a good chlorine residual is maintained.

Record Free Chlorine residual on chain of custody

Disinfect bib with chlorine solution

Flush 2 more minutes

Reduce flow

Quickly open bottle Do NOT set lid down or touch the inside of the lid

Fill bottle to 100 ml mark with no splashing carefully replacing lid immediately

Place bottle in cooler with frozen ice packs. No melted ice in cooler.

If lid is dropped, touched, or compromised with water splashes then discard sample bottle and start over.

(over)

If Positive:

Follow sampling plan and conduct repeat sampling including 4 samples;

Repeat same site

Sample upstream site designated in sampling plan

Sample downstream site designated in sampling plan

Sample source: Blended raw well sample entering RO plant

Notify SBCO Sanitary engineer Andres Aguirre (909)383-4308

Always call lab for results within 24 hours when submitting repeat samples. If off the following day ALERT next operator on duty as well as the rest of the staff on duty. Communicate positive test results to supervisor immediately.

If repeat samples come back positive contact state health engineer for guidance on issuing boil water notice. Launch Level one assessment to determine cause of contamination. This situation warrants swift and immediate action. If unsure, call State for guidance Andres Aguirre, Sanitary Engineer (909)383-4308

- Positives on 8/7/2017 and 11/2016 triggered a level II assessment (two excedences within 1 year time frame)